

AMENDMENTS TO THE CLAIMS

Please amend the claims as set forth below. This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Canceled)
2. (Currently amended) The system battery backup apparatus of claim ~~10~~ 12 ~~comprising wherein the battery backup apparatus includes~~ an audible signaling device.
3. (Currently amended) The system battery backup apparatus of claim 2 ~~comprising wherein the battery backup apparatus includes~~ a battery and an apparatus for enabling the audible signaling device in response to current flowing from the battery to the DC voltage supply of the movable barrier operator via the unidirectional isolation device.
4. (Currently amended) The system battery backup apparatus of claim ~~10~~ 12 ~~comprising wherein the battery backup apparatus includes~~ one or more visual signaling devices.
5. (Currently amended) The system battery backup apparatus of claim ~~10~~ 12 wherein the battery backup apparatus ~~charging device~~ comprises a battery and circuitry for limiting a current applied to ~~the a first battery terminal~~ of the battery.
6. (Currently amended) The system battery backup apparatus of claim 5 wherein the circuitry for limiting, limits the current to an amount less than a predetermined maximum amount.

7. (Currently amended) The system battery backup apparatus of claim 10 ~~comprising~~ wherein the battery backup apparatus includes a battery and cut out circuitry for disconnecting ~~a~~ the first battery terminal of the battery from the unidirectional isolation device.

8. (Currently amended) The system battery backup apparatus of claim 10 ~~comprising~~ wherein the battery backup apparatus includes a battery, a battery charging circuit, and cutout circuitry for disconnecting ~~a~~ the first battery terminal of the battery from the battery charging circuit.

9. (Cancelled)

10. (Currently amended) A ~~battery backup apparatus for use with a barrier movement operator~~ system comprising:

a movable barrier operator, the movable barrier operator comprising:

a DC voltage supply having a mains input voltage, the mains input voltage receiving a mains voltage;

a barrier movement control coupled to the DC voltage supply via a DC power connection;

at least one conductive path connected to the DC voltage supply, the conductive path including a unidirectional isolation device and an impedance element;

a first mating portion of a plug coupled to the conductive path, the plug externally accessible from the movable barrier operator

~~a DC power connection from the DC voltage supply to a barrier movement control;~~

~~a battery having first and second terminals;~~

~~a first conduction path and a second conduction path connected to the DC voltage supply;~~

~~a battery charging circuit for receiving a DC voltage from the DC voltage supply via the first conduction path and the second conduction path and for charging the battery when the DC voltage from the DC voltage supply exceeds a predetermined voltage; and~~
~~a third conduction path comprising a unidirectional isolation device connecting a battery DC voltage from the first battery terminal to the DC voltage supply via the first conduction path such that a magnitude of the battery de voltage is conducted along the third conduction path without being substantially adjusted by any intervening electrical device along the third conduction path when mains voltage to the mains voltage input fails.~~

11. (Currently amended) The ~~battery backup apparatus~~ system of claim 10, wherein ~~the predetermined voltage exceeds 20 volts~~ the movable barrier operator provides a DC voltage at the plug, the DC voltage being provided via the impedance element of the conductive path when the DC voltage from the DC voltage supply exceeds a predetermined threshold; and

wherein a battery backup apparatus that is configured to be electrically connected to a battery and is external and separate from the movable barrier operator provides a battery backup voltage such that when the mains voltage to the mains voltage input fails, the battery backup voltage is provided via the plug and through the unidirectional isolation device of the conductive path to the DC voltage supply.

12. (New) The system of claim 10 further comprising a battery backup apparatus configured to be connected to a second mating portion of the plug of the movable barrier operator.

13. (New) The system of claim 10 wherein the impedance element and unidirectional isolation device are connected in parallel.

14. (New) The system of claim 10 wherein the impedance element comprises at least one resistor and the unidirectional isolation device comprises a diode.

15. (New) A battery backup apparatus for use with a barrier movement operator, the battery backup apparatus comprising:

a battery;

a battery charging circuit coupled to the battery;

wherein the battery backup apparatus is connected to a plug on the movable barrier operator and wherein the battery charging circuit is configured to receive a DC voltage from a DC power supply located within the movable barrier operator via the plug, and to charge the battery when the DC voltage from the DC voltage supply exceeds a predetermined voltage;

wherein the battery backup apparatus is further configured to provide a battery backup voltage at the plug, the battery backup voltage being provided from the battery when mains voltage to the movable barrier operator fails; and

wherein the battery backup voltage is provided to the DC voltage supply located within the movable barrier operator via a conduction path that is located within the movable barrier operator, and wherein the conduction path located within the movable barrier operator comprises a unidirectional isolation device.